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of

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for

VOICE TRANSITION SCRIPT CALLER

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VOICE TRANSITION SCRIPT CALLER

BACKGROUND OF THE INVENTION

Related Applications

This application claims the benefit of earlier filed U.S. provisional patent application Serial No. 60/225, 623, filed August 15, 2000, and titled "Voice Transition Script Caller," which is incorporated herein by reference.

Field of the Invention

The present invention relates generally to the management of a phone calling system for contacting customers or other contacts. More particularly, the present invention relates to a calling system which can seamlessly switch between and manage live voice and pre-recorded scripts.

Technical Background

In the sales business, telephone marketing is essential. Simply put, the more potential customers you contact, the more potential sales you will have. In the telemarketing business, many people are employed to contact potential customers. These employees typically have a script to read from so that the sales pitch is uniform and important information is not left out. Although market research may determine the best information to present to a particular type of customer contact, different agents present the material in different ways, and the way in which the agent communicates with a potential customer or contact is often the difference between a sale or a rejection. To that end, professional voice actors may be employed to deliver scripted information and content to contacts and potential customers. Ultimately, the voice actor records scripts to be played by multiple sales agents.

The problem with many existing calling systems however, is that they are inflexible in responding to a customer. A prerecorded script cannot respond with

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1 pertinent information to a presently-asked question. Perhaps most importantly, potential
2 customers are often turned off by the fact that they are not talking to a live person, but
3 rather a recording. A dialog between the calling system and the live contact may be
4 disjointed because a computer controls the navigation and playing of the scripts and a
5 particular prerecorded response selected by the computer may not precisely match the
6 response by the contact. Another problem with many calling systems is that a human
7 agent cannot interject into the dialog to respond to a concern by the contact, either by
8 live-voice, or by a prerecorded interjection that is not part of a preplanned sales dialog.

9 Further, most existing calling systems do not keep track of data presented by the
10 system and received by the contact. Nor can these systems verify information provided
11 by the contact.

12 Presently known calling systems that play prerecorded scripts, either do not allow
13 for interjection by a human voice, or do not allow the transparent switch from computer
14 to human voice without a difference in sound or quality that is obvious to the contact.
15 Further, existing telephone calling systems do not allow the seamless transition in content
16 between a live voice and a prerecorded script.

17 Thus, it would be an advancement in the art to provide a calling system and
18 method for contacting a customer that is flexible in the way content is presented to a
19 customer. It would be an additional advancement in the art to provide such a system and
20 method that could be used with outgoing calls. It would be another advancement if a
21 variety of prerecorded content could be provided and easily negotiated by a sales agent. It
22 would be an additional advancement in the art to provide a system and method that could
23 keep track of important calling and contact data. It would be yet an additional
24 advancement in the art to provide a system and method for seamlessly and transparently
25 integrating an agent's live voice with a prerecorded voice by someone other than the
26

1 agent. It would be another advancement to provide a system and method that was easy to
2 utilize and navigate between scripts to form a dialog that was not disjointed.

3 Such a system and method in accordance with the present invention is disclosed
4 and claimed herein.

5 SUMMARY OF THE INVENTION

6 The present invention solves many or all of the foregoing problems by introducing
7 a system and method by which a an agent can initiate an outgoing call and seamlessly and
8 selectively transition between prerecorded scripts and/or the agents live voice.

9 In one embodiment, the calling system includes an output device for providing
10 audio outputs from an agent. The system also includes an input device for receiving
11 audio inputs from a contact. A player for outputting scripted voice waveforms over a
12 phone line to a contact is also included. A signal processor is configured to provide a
13 normalized signal selected from the output device and the player.

14 The signal processor may match the signal-to-noise ratio of the input coming into
15 the signal processor and the output going out. In one preferred embodiment, the player
16 provides an input to the signal processor which provides an output having a signal-to-
17 noise ratio substantially the same as the signal-to-noise ratio of the output device.

18 Accordingly, the signal processor can normalize a first voice waveform received from the
19 output device and a second voice waveform received from the player so that they sound
20 the same to the contact. This can be accomplished because the telephone system has a
21 limited band width that carries the voice. Additionally, the sound card adjusts the
22 microphone volume of the telemarketing agent to match the volume of the pre-recorded
23 script. Because both the voice of the telemarketing agent and the sound of the pre-
24 recorded script pass through the same amplifier system, and then through the limited band
25 of the telephone line, the sound quality of the telemarketing agent and the pre-recorded
26 script are the same. The hardware acts as a filtering element for both sources of sound.

1 The system also includes a computer having a processor and a memory device.
2 The memory device stores a script module which is executable on the processor. The
3 system is configured to provide an output having a bandwidth greater than the response
4 bandwidth of a telephone network. Thus, the system acts as a filter to make it difficult for
5 the contact to tell the difference between the prerecorded scripts played by the system and
6 the human agent's voice spoken through the system.

7 In one aspect of the invention, a calling system includes a script module
8 configured to provide recorded voice waveforms and an integration module configured to
9 interface between an agent and the script module. The script module may include a script
10 player for playing the recorded voice waveforms. In one preferred embodiment, the
11 recorded waveforms are selected from computer generated wave files, audio recordings,
12 synthesized voice, and actual voices. The system allows the recorded waveforms to be
13 selectively provided by a human agent.

14 The integration module may include a telephone interface module to facilitate
15 interaction with the system and a telephone system. In one embodiment, the telephone
16 interface module allows a human agent to initiate a call to a contact. In one embodiment,
17 a human agent or a computer dialer may initiate a call to a contact. The computer
18 program allows the telemarketing agent to login and select a type of voice for the pre-
19 recorded script. For example, the telemarketer may be a female with a low voice and she
20 would select the script that has been pre-recorded in a low speaking female's voice.

21 The integration module allows the execution of an interaction protocol by a
22 human agent for interacting with a contact. The interaction protocol allows the agent to
23 select and present content to a contact in the selected voice type and pose a question or
24 statement to a contact in response to a contact's response or statement. The integration
25 module may include a mode module to allow a sales agent to select between one of live
26 voice interaction, script interaction, and interjection interaction between the agent and a

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1 contact. The hardware and software make it difficult for an untrained ear to tell the
2 difference between the pre-recorded script and the live voice of the telemarketer.

3 The program may present to the telemarketing agent a number of options on the
4 monitor. On one side of the monitor are shown scripted responses that are standard in
5 general conversations such as an affirmative response, a negative response, or a laugh.
6 On the other side of the screen are anticipated responses that the potential customer may
7 make in answer to the live telemarketing agent's initial questions.

8 For example, the live telemarketer's initial question is usually a yes or no question
9 and, depending upon the potential customer's response, she would type in a letter
10 corresponding to the customer's response; in this case "yes" or "no." This selection by the
11 telemarketer would play a pre-recorded message ending in a question, to which the
12 potential customer could give a limited number of responses. Those anticipated
13 responses are shown on the screen and depending upon the response given by the
14 potential customer, the telemarketer would click on that response. The next pre-recorded
15 script would play ending in questions capable of being answered in a finite number of
16 ways which would be shown on the screen. In this way, the potential customer's answers
17 to questions are anticipated and responses to those answers are pre-recorded. The
18 telemarketing agent simply clicks on the answer given by the potential customer and in
19 that way can control the branching of a dialog between the potential customer and the
20 recorded script. At any time during the process, the telemarketing agent can pause the
21 program and talk live with the customer. This might happen when the customer gives a
22 response that was not anticipated and for which there is no counter response that has been
23 pre-recorded. The program also allows the telemarketing agent to move back up the
24 dialog branch and click on different pre-recorded responses that would answer the
25 potential customer's questions or statements.
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1 Accordingly, this invention allows the telemarketing agent to flexibly control the
2 direction of the dialogue with a potential customer using branching techniques and script
3 positioning to play pre-recorded responses to any one of many potential questions or
4 statements by the potential customer. In this way, the potential customer has the illusion
5 of talking to a responsive, live telemarketing agent.

6 In one embodiment, the includes a database module for storing and retrieving
7 data. The database module may be able to update a contact file and keep a record of
8 which scripts were played during an interaction between the agent and a contact.

9 The method for contacting a customer may include the steps of providing an
10 integrated system for interaction with a contact, the interaction being selectable between
11 human and computer delivery. An interaction protocol may then be executed to create an
12 interaction with the contact. A call may be placed to a contact and responses to a contact
13 from a human agent and a recorded script can be selectively interwoven into the call.

14 The step of interweaving responses in the agent's live script and in pre-recorded
15 script further includes listening by the human agent to a response from the contact. The
16 agent may then select and present content to the contact. The agent may then pose a
17 question to the contact and repeat the process of listening to the contact and selecting and
18 presenting more content. At any time, the agent may decide to intervene into the dialog
19 and present content via live voice or prerecorded script. The method of customer
20 contacting may also include validating sales information and keeping a history of
21 recorded scripts played.

22 Accordingly, the present invention provides a client-initiated program and method
23 of using same for providing outgoing calls. The invention may provide human voice or
24 pre-recorded scripts that are flexible in the way content is presented and easily negotiated.
25 The present invention also provides a program that allows for live validation of sale
26 information (i.e. credit card information, etc.) and allows the operator to maintain and

1 update a customer profile. The system and method of the present invention also allows
2 the program to keep an historical record of which pre-recorded tracks were played by the
3 sales agent and in what order. Thus, promises or statements which the customer alleges
4 were made by the sales agent can be verified or denied with a tangible record. The
5 system of the present invention provides for the seamless and transparent integration of
6 an agent's live voice with a prerecorded voice by someone other than the agent.

7 These and other features and advantages of the present invention will become
8 more fully apparent from the following description and appended claims, or may be
9 learned by the practice of the invention as set forth hereinafter.

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1 **BRIEF DESCRIPTION OF THE DRAWINGS**

2 To better understand the invention, a more particular description of the invention
3 will be rendered by reference to the appended drawings. These drawings only provide
4 information concerning typical embodiments of the invention and are not to be con-
5 sidered limiting of its scope. The invention will be described and explained with
6 additional specificity and detail through the use of the accompanying drawings, in which:

7 Figure 1 is a schematic block diagram of a computer system suitable for
8 implementing one embodiment of the invention;

9 Figure 2 is a schematic block diagram of the physical components of one
10 embodiment of a calling system which incorporates the computer system of Figure 1;

11 Figure 3 is a schematic block diagram of the system of Figure 2, showing an
12 integration module for providing seamless live-voice and prescribed integrated and
13 interactive customer contacting according to one embodiment of the present invention;

14 Figure 4 is a schematic block diagram of a voice transition module of the system
15 of Figure 3 according to one embodiment of the present invention;

16 Figure 5 is a schematic block diagram illustrating a script module of the
17 embodiment of Figure 2, showing a script module for providing and playing prerecorded
18 script options according to one embodiment of the present invention;

19 Figure 6 is a user interface displaying various options for a user of the system and
20 method of the present invention; and

21 Figure 7 is a flow diagram of a method of the present invention.

22 The figures depict embodiments of the present invention for purposes of
23 illustration only. Those skilled in the art will readily recognize from the following
24 discussion that alternative embodiments of the illustrated structures and methods may be
25 employed without departing from the principles of the invention described herein.
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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Certain preferred embodiments of a system in accordance with the invention are now described with reference to the Figures 1-7, where like reference numbers indicate identical or functionally similar elements. The components of the present invention, as generally described and illustrated in the Figures, may be implemented in a wide variety of configurations. Thus, the following more detailed description of the embodiments of the system and method of the present invention, as represented in the Figures 1-7, is not intended to limit the scope of the invention, as claimed, but is merely representative of presently preferred embodiments of the invention.

Various components of the invention are described herein as "modules." In various embodiments, the modules may be implemented as software, hardware, firmware, or any combination thereof. For example, as used herein, a module may include any type of computer instruction or computer executable code located within a memory device and/or transmitted as electronic signals over a system bus or network. An identified module may, for instance, comprise one or more physical or logical blocks of computer instructions, which may be organized as an object, procedure, function, or the like.

Nevertheless, the identified modules need not be located together, but may comprise disparate instructions stored in different locations, which together implement the described functionality of the module. Indeed, a module may comprise a single instruction, or many instructions, and may even be distributed over several different code segments, among different programs, and across several memory devices.

As used herein, the term executable code, or merely "executable," is intended to include any type of computer instruction and computer executable code that may be located within a memory device and/or transmitted as electronic signals over a system bus or network. An identified module of executable code may, for instance, comprise one or

1 more physical or logical blocks of computer instructions which may, for instance, be
2 organized as an object, procedure, or function. Nevertheless, the executables of an
3 identified module need not be located together, but may comprise disparate instructions
4 stored in different locations which together comprise the module and achieve the purpose
5 stated for the module. Indeed, an executable may be a single instruction, or many
6 instructions, and may even be distributed over several different code segments, among
7 different programs, and across several memory devices.

8 Similarly, operational data may be identified and illustrated herein within
9 modules, and may be embodied in any suitable form and organized within any suitable
10 type of data structure to be used, produced, or operated on during execution of an
11 executable. The operational data may be collected as a single data set, or may be
12 distributed over different locations including over different storage devices, and may at
13 least partially exist merely as electronic signals on a system bus or network.

14 Figure 1 is a schematic block diagram illustrating a computer system 10 in which
15 a plurality of modules may be hosted on one or more computer workstations 12 connected
16 via a network 14. The network 14 may comprise a wide area network (WAN) or local
17 area network (LAN) and may also comprise an interconnected system of networks, one
18 particular example of which is the Internet.

19 A typical computer workstation 12 may include a central processing unit (CPU)
20 16. The CPU 16 may be operably connected to one or more memory devices 18. The
21 memory devices 18 are depicted as including a non-volatile storage device 20 (such as a
22 hard disk drive or CD-ROM drive), a read-only memory (ROM) 22, and a random access
23 memory (RAM) 24.

24 Preferably, the computer workstation 12 operates under the control of an operating
25 system (OS) 25, such as OS/2®, WINDOWS NT®, WINDOWS®, UNIX®, and the like. In
26 one embodiment, the OS 25 may provide a graphical user interface (GUI) to enable the

1 user to visually interact with the modules of the present invention. The OS 25 may be
2 loaded from the non-volatile storage device 20 into the RAM 24 at the time the
3 workstation 12 is booted.

4 The workstation 12 may also include one or more input devices 26, such as a
5 mouse 50 and/or a keyboard 52 (Figure 2), for receiving inputs from a user. Similarly,
6 one or more output devices 28, such as a monitor and/or a printer, may be provided
7 within, or be accessible from, the workstation 12.

8 A network interface 30, such as an Ethernet adapter, may be provided for coupling
9 the workstation 12 to the network 14. In one embodiment, the workstations 12 may be
10 coupled to the network 14 via a distributed remote data architecture (DRDA). Where the
11 network 14 is remote from the workstation 12, the network interface 30 may comprise a
12 modem, and may connect to the network 14 through a local access line, such as a
13 telephone line.

14 Within any given workstation 12, a system bus 32 may operably interconnect the
15 CPU 16, the memory devices 18, the input devices 26, the output devices 28, the network
16 interface 30, and one or more additional ports 34, such as parallel and serial ports.

17 The system bus 32 and a network backbone 36 may be regarded as data carriers.
18 Accordingly, the system bus 32 and the network backbone 36 may be embodied in
19 numerous configurations, such as wire and/or fiber optic lines, as well as electromagnetic
20 channels using visible light, infrared, and radio frequencies.

21 In general, the network 14 may comprise a single local area network (LAN), a
22 wide area network (WAN), several adjoining networks, an Intranet, or, as in the manner
23 depicted, a system of interconnected networks such as the Internet 40. The individual
24 workstations 12 may communicate with each other over the backbone 36 and/or over the
25 Internet 40 using various communication techniques.

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1 For instance, different communication protocols, e.g., ISO/OSI, IPX, TCP/IP, may
2 be used within the network 14. In the case of the Internet 40, however, a layered
3 communications protocol (i.e. TCP/IP) generally best enables communications between
4 the differing networks 14 and workstations 12.

5 The workstations 12 may be coupled via the network 14 to application servers 42,
6 and/or other resources or peripherals 44, such as scanners, printers, digital cameras, fax
7 machines, and the like. External networks, may be coupled to the network 14 through a
8 router 38 and/or through the Internet 40.

9 Referring now to Figure 2, the computer system 10 is part of a calling system 11
10 for customer contacting. A user or sales agent may wear a headset 60 which includes an
11 earpiece 62 for receiving audio inputs from a contact. A microphone 64 may be provided
12 for providing audio outputs to the contact from the agent. A signal processor 70 is
13 connected to the earpiece 62 by means of a speaker outline 66. The signal processor 70 is
14 also connected to the microphone 64, which may also be connected to the headset 60, by
15 means of a microphone in line 68.

16 The signal processor 70 may be connected to a sound card 80 by means of input
17 lines 76 and output lines 78. It will be appreciated that the signal processor 70 may be
18 part of the computer system 10. In this embodiment, the signal processor may interact via
19 the busline 32. The sound card 80 is connected via the busline 32 to the CPU 16 and to
20 output devices 28 including a script player 81. The sound card 80 is capable of outputting
21 scripted voice waveforms over a telephone system 73 to the contact. It will be
22 appreciated that the sound card 80 together with the processor 16 act as a player 81. In
23 other embodiments, the player 80 may be a script player 81 which may be a stand alone
24 module or device.

25 The sound card 80 or player 81 may be configured to provide an input to the
26 signal processor 70 over a bus line 76, 78 effective to render an output therefrom to the

1 contact having a signal-to-noise ratio substantially the same as the signal-to-noise ratio of
2 the output device 64.

3 The signal processor 70 may include an impedance matching device 72 which
4 may be connected to the phone system 73 and consequently to a potential customer's
5 telephone 74. The impedance matching device 72 may be integral with the signal
6 processor 70 or may be a stand-alone device. The signal processor 70, together with the
7 impedance matching device 72, are configured to provide a normalized signal selected
8 from one of the output device 68 and the sound card 80 or player 81. The signal
9 processor 70 and the impedance matching device 72 are further configured to
10 substantially match the signal-to-noise ratio of an output thereof, independent from the
11 input thereto. Accordingly, the signal processor 70 and/or the impedance matching
12 device 72 may normalize a first voice waveform received from the output device 64 and a
13 second voice waveform received from the sound card 80 so that the source of these voice
14 waveforms is substantially indistinguishable to the contact over the phone system 73.

15 Thus, the present invention allows the transparent interleaving of live voice and
16 prerecorded script by the agent. The transparent interleaving is further accomplished
17 because the bandwidth of the data leaving the signal processor 70 and impedance
18 matching device 72 is greater than the bandwidth of the phone system 73, or an individual
19 phone line that is part of the phone system 73. A normal phone line band width is
20 between about 200 hz and 6,000 hz. The output from the system 10 in one embodiment
21 of the present invention is delivered at a band width approaching 20,000 hz. By sending
22 the recorded voice and the live voice through the same output, namely the signal
23 processor 70 and impedance matching device 72, at a higher band width than the phone,
24 a natural filtering occurs making the two sounds indistinguishable when the scripts are
25 recorded at a high sampling rate. The customer being called can not tell the difference
26 between the agent's voice and the pre-recorded script that an agent may decide to play.

1 The transparency between the output delivery of the live voice and prerecorded
2 script to the contact is also accomplished because the prerecorded scripts are recorded at a
3 high sampling rate. In one preferred embodiment, the sampling rate of recording is
4 approximately 44,100. It will be appreciated by those of skill in the art that this is higher
5 than typical phone recording sampling rates.

6 The signal processor 70 interacts with the computer's memory 18, which in a
7 preferred embodiment, contains an integration module 82 and a script module 84, which
8 are executable on the processor 16. As will be discussed in greater detail below, this
9 hardware and software configuration allows a human agent or the program itself to
10 execute an interaction protocol to create interaction with a contact or potential customer.
11 The hardware and software of the this system 11 allows the sales agent or computer to
12 initiate the call and selectively interleave responses from the agent and a recorded script.

13 Referring now to Figure 3, the integration module 82 includes a voice transition
14 module 86 for allowing the user to transition between live voices, a script branching
15 hierarchy, and various interjections. As will be discussed in greater detail below, the
16 voice transition module 86 includes graphics and executable files for easy user
17 navigation.

18 The integration module 82 may contain a database module 88 for storing and
19 retrieving data. In one embodiment, the database module 88 includes database records
20 90, a database engine 92, and database indices 94. The database engine 92 may access
21 data 93 and a schema 95 that are part of the database records 90. Examples of data may
22 include call records 93 or prospect records 93. The integration module 82 also includes a
23 database interface module 96 and statistical abstracts 98 for ease in interfacing with the
24 database engine 92 and records 90. The database module 88 of the present invention may
25 include database indices 94 that allow you to parse through database records 90 looking
26 for specific information. The agent of user may selectively create or identify countless

1 indices 94 to facilitate the convenient retrieval of data. It will be appreciated that the
2 database engine 92 and records 90 may be stand alone standardized database products
3 known in the industry such as those made by Cybase® or Oracle®.

4 A statistical analysis engine 99 may operate in the background to access the
5 database engine 92 and provide analysis of the database records 90. The statistical
6 analysis engine 99 along with the database engine 92 may be programmed, or accessed
7 manually, to update and generate reports, or retrieve information on customer profiles,
8 purchasing habits, purchaser demographics, product popularity, and other commercially
9 valuable information. This information may be utilized to help the user or agent know
10 which calls to make.

11 The database module 89 is also configured to maintain a history of any
12 prerecorded scripts played by the system 11. It will be appreciated that this will help
13 determine or confirm what was represented to the contact by the sales agent or user.

14 Accordingly, the database module 88 of the system 11 allows for the automatic or
15 manual update of a contact or customer file. The database module 88 allows the user,
16 either manually or automatically, to keep and update a customer profile. The database
17 module 88 also provides data storage and retrieval capabilities that allow the history of
18 scripts to be recorded and archived for possible future reference.

19 The integration module 82 may contain a telephone interface module 100 which
20 allows the system 10 of the present invention to interface with the telephone system 73.
21 The telephone interface module 100 allows a human agent or a computer dialer to initiate
22 a call to a contact. In one embodiment, the telephone interface module 100 may go into
23 the statistical abstracts 98, for example and request data 99 such as all of the contact
24 information on people who buy from a particular store, or who have bought something
25 within the last 90 days and have incomes over \$50,000. The telephone interface module
26 100 may go through the the demographic data or customer profile data stored in the

1 database module 88. The telephone interface module 100 may then take the statistical
2 abstract 98 data and initiate the call for the agent. In another embodiment, the telephone
3 interface module 100 may present the agent with a menu of various options from which to
4 choose including phone numbers of various contacts. The agent may then initiate the call
5 or have the telephone interface module 100 make the call.

6 The present invention also includes a commercial transaction module 110 which
7 in one embodiment, contains a credit card input 112, a validation 114, and a product input
8 116. The commercial transaction module 110 allows the system 10 to validate contact
9 sales information. The commercial transaction module 110 does all the credit card
10 readings. The commercial transaction module may utilize the credit card input 112 and a
11 validation 114 to determine whether the credit card has expired. The commercial
12 transaction module 110 may also double check the information that an agent enters
13 against stored information. The commercial transaction module 110 may also use the
14 product input 116 to track and record product purchases. The product data may be sent to
15 a manufacturer or distributor for shipment. It will be readily appreciated by those of skill
16 in the art that credit data may be included as data 93 in the database records 90 including,
17 user ID, credit card number, expiration date, and credit history verification.

18 The integration module 82 also includes an administration module 120 which may
19 have a login 122, a user security 124, and preferences 126. The login 122 may query a
20 user for identification information which may include a user name and password. The
21 user security 124 may be configured to conduct security checks. Thus, the administration
22 module 120 may require customer authorization before the agent can access the content
23 of the system or any system displays. The user security 124 module may administer the
24 access to sensitive information such as credit card numbers, social security numbers,
25 personal telephone numbers, passwords, keys, and the like. In this manner, the contact
26 has less anxiety in given up certain information during the call. The administration

1 module 120 is further configured to store system preferences 126 such as logins, agent
2 names, times, dates, passwords, and the like.

3 Referring now to Figures 3 and 4, the voice transition module 86 may cue up a
4 script by means of a script menu display module 170. The script menu display module
5 170 may display script data 172 on the monitor 53. By clicking on the data 172, the users
6 may launch an executable file 174 for the selected script. The voice transition module 86
7 also includes an interjection menu display module 175 like the script menu display
8 module 170. The interjection menu display module 175 may display interjection script
9 data 177 on the monitor 53 which when clicked or selected, launches an executable 179
10 for playing the interjection script. As discussed in greater detail below, the script menu
11 display module 170 poses closed-ended questions, while the interjection display module
12 selectively interjects statements by the human agent or user. The interjections may be
13 selectively chosen from the human agent's or user's voice, and a recorded voice
14 waveform. Accordingly the integration module 82 allows a user to select and present
15 content to a contact.

16 The voice transition module 86 may also include a screen graphics display module
17 176. The screen graphics display module 176 may interact with graphics files 177, to
18 facilitate the display of scripts or interjections on the screen for the user to select. The
19 graphics display module 176 makes the program user friendly. The screen graphics
20 display module 176, together with the graphics files 177, may produce images on the
21 screen, prompts, reminders, borders, and a graphical presentations that can be navigated
22 by the agent using a mouse 50.

23 The voice transition module 86 also includes a navigation module 184 for
24 negotiating between scripted responses to a contact. The navigation module 184 is
25 responsible for interacting between the monitor 53 and the mouse 50 and the agent. The
26 navigation module 184 allows the script menu display module 170 to have executable

1 files 185 associated with data 187 on the screen to allow the agent to point and click with
2 the mouse 50 or use a keyboard 52 to navigate between screens.

3 The voice transition module 86 of the integration module 82 may include a mode
4 module 180 with various mode sections 182. The mode module 180, allows the agent to
5 select between different modes 182, including, live voice, script menu, or an interjection
6 menu in order to interact with a contact. The mode module 180 switches hardware, so
7 that the system is taking the data from different places in the program or voice input. As
8 will be discussed in greater detail below, the selected script data 172 or interjection data
9 177 is played to the contact as recorded waveforms which may be preferably selected
10 from computer generated wave files, audio recordings, synthesized voice, and actual
11 voice.

12 In one embodiment, the microphone 64 may be on all the time with the volume
13 turned down when the mode module 180 is in the script or interjection mode. In another
14 embodiment, the microphone 64 is turned off during script or interjection mode and back
15 on during live voice mode. In still another embodiment, one mode signal is simply
16 overridden by another signal when the mode changes. The mode module 180 is what
17 transitions the electronic switch around without sounding anything to the customer.
18 Thus, in live voice, a user or the system does not have any clicks or pauses or transitional
19 changes in pitch.

20 Referring now to Figure 5, when the agent determines to play scripted questions
21 190, the script module menu 84 turns on the script player 81. The script module 84 feeds
22 the start of a scripted question 190 or an interjection 192 to the script player 81 for
23 playing. The mode module 180 (Figure 4) turns on the script player 81. When the system
24 10 receives an interrupt signal back from the script player 81, the system 10 may perform
25 a live voice transition back to the microphone 64 unless there is another scripted
26 questions 190 or interjection 192 selected. If so, the mode module 180 transfers control

1 of the program to the script player 81 for playing of the next recorded data 190, 192. The
2 scripted questions 190 are prerecorded as a series of questions with a finite number of
3 possible answers. When the first question is asked, the agent may select one of the
4 known possible answers by clicking on the graphically displayed answer. This launches
5 the next scripted question 190 which also has a known number of answers, the selection
6 of which by the agent will launch the playing of the next scripted question 190. The
7 location of the various scripted questions 190 may be displayed in a script tree 150 which
8 can be navigated by a mouse 50, keyboard 52, or other input device such as a touchpad,
9 voice recognition software, and the like. At any time, the agent may interject with an
10 interjection statement 192 such as "yes," "no," "uh huh," laughter, and the like. The user
11 may also select a scripted ending statement 194 such as "thanks for purchasing our
12 product," or a description of the product selected by the contact. Accordingly, the system
13 11 is configured to allow the agent or user to selectively provide prerecorded waveforms
14 in the form of scripted dialog.

15 Referring now to Figure 6, a user interface 200 displays various options for the
16 user. A first or any subsequent scripted question 190 is displayed. In conjunction with
17 the scripted question, a number of corresponding possible answers 196 are displayed.
18 Interjection scripts 192 are displayed should the user wish to interject into the series of
19 questions and answers statements. Control options 202 allow the user to switch from
20 scripted statements to live voice and back again. Navigational options 198 may also be
21 displayed to move through hierarchical layers in a menu organization.

22 Referring now to Figure 7, a flow diagram of a method of the present invention is
23 shown. The user may execute an interaction series 230 for executing a call to a contact.
24 The user may then select and present content 232 to the contact. The content 232, this
25 may be in the form of a question having a finite number, or closed set, of answers. The
26 user may then listen to a response 234 and decide whether to intervene 236 in the call. If

1 the user does decide on intervention, he may decide 238 to create and deliver a personal
2 live-voice response 240 or select and play one of number of scripted responses 242. The
3 user then listens to the response 234 and again decides whether to intervene 236 in the
4 call. If the user does not decide to intervene, the user may decide to select and play
5 another scripted response 244, which starts the process over. The user may also decide to
6 end the call 246 by live voice or by playing a standard ending script.

7 The method for customer contacting may start by providing an integrated system
8 for interaction with a contact. The interaction is selectable from between human and
9 computer delivery. The user may execute an interaction protocol to create an interaction
10 with the contact. The call may then be initiated by the user or computer, for example by
11 means of a dialing system, and the user may selectively interleave responses from a
12 human agent and a recorded script.

13 The recorded script may include recorded data effective to control a computer for
14 generating a human-sounding voice waveform. The recorded script is selected from
15 computer-generated wave files, audio recordings, and synthesized voice. The recorded
16 script may also a voice waveform created independently from the human agent. The
17 voice waveform may also be an audio track of a voice response recorded by a voice actor.

18 Executing an interaction series or protocol 230 may include logging on by an
19 agent. Executing an interaction series or protocol 230 may also include selecting a
20 contact type. This may done according to available demographic data or referral data.
21 The method may also include validating sales information. This may or may not be
22 included as part of executing an interaction series 230. Validating may be done by human
23 agent or a computer dialing system. The method may also includes updating a customer
24 file based sales decisions or information gathered during the phone call.

25 A history of recorded and played scripts may be kept in the computers memory
26 18. This history may be recalled for a variety of reasons, including to verify what the user

1 or agent claims was said to the contact or to contradict what a contact claims he or she
2 was told by the agent. The history of the scripts played is quite similar to a recording of
3 the entire conversation, given that particular scripts are linked to a finite range of answers
4 given by the contact. Thus, a user of the system, in many instances, can recall both sides
5 of a conversation between the agent and the contact.

6 The step of interleaving responses to the contact from either the agent or the
7 computer includes listening by the human agent to a response from the contact 234.
8 Based on what is said or not said, the agent may select and present content to the contact
9 234. Presenting content may be by posing a question to the contact which corresponds to
10 a particular answer given by the agent. The answer may have been anticipated and
11 displayed on the agent's computer screen. By clicking on the answer displayed on the
12 screen, the computer launches the playing of the next script, which is a logical
13 progression of the conversation or presentation of prior scripts.

14 At any time, the agent may decide to intervene 236 in the logical progression of
15 the branching script. The agent may decide to play interjection script that is
16 conversational in nature. For example, if the contact does not give a clear response, then
17 the agent may not be able click on one of a predetermined number of answers associated
18 with the scripted question asked. In this case, the agent may decide to intervene in the
19 logical presentation of scripted questions and answers and play an interjection script 242
20 such as "I'm sorry, could you repeat that." Once a clear answer is given, the agent may
21 again go back to the script tree by clicking on the answer given by the contact which will
22 launch the playing of the next script in the progression. The agent may also decide to
23 intervene 236 with a live voice response 240.

24 At any time during the playing of scripts or the presentation of live voice input,
25 the agent may selectively decide to end the call 244. This may be accomplished by
26 playing an ending script such as, "How many videos would you like to order," or "I'm

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1 sorry your not interested, but have a nice evening.” The agent may also decide to end the
2 call with live voice. The program is then ended.

3 The present invention may be embodied in other specific forms without departing
4 from its scope or essential characteristics. The described embodiments are to be
5 considered in all respects only as illustrative and not restrictive. The scope of the
6 invention is, therefore, indicated by the appended claims rather than by the foregoing
7 description. All changes which come within the meaning and range of equivalency of the
8 claims are to be embraced within their scope.

9 From the above discussion, it will be appreciated that the present invention
10 provides a client-initiated program and method of using same for providing outgoing
11 calls. The invention may provide human voice or pre-recorded scripts that are flexible in
12 the way content is presented and easily negotiable. The present invention also provides a
13 program that allows for live validation of sale information (i.e. credit card information,
14 etc.) and allows the operator to maintain and update a customer profile. The system and
15 method of the present invention also allows the program to keep an historical record of
16 which pre-recorded tracks were played by the sales agent and in what order. Thus,
17 customer-alleged promises statements by the sales agent can be verified or denied with a
18 tangible record. The system of the present invention provides for the seamless and
19 transparent integration of an agent’s live voice with a prerecorded voice by someone other
20 than the agent..

21 The present invention may be embodied in other specific forms without departing
22 from its structures, methods, or other essential characteristics as broadly described herein
23 and claimed hereinafter. The described embodiments are to be considered in all respects
24 only as illustrative, and not restrictive. The scope of the invention is, therefore, indicated
25 by the appended claims, rather than by the foregoing description. All changes which
26

1 come within the meaning and range of equivalency of the claims are to be embraced
2 within their scope.

3 What is claimed and desired to be secured by United States Letters Patent is:
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